THE CHANCERY COURT OF JACKSON COUNTY, MISSISSIPPI

IN RE MIKE MOORE, ATTORNEY GENERAL ex rel.
STATE OF MISSISSIPPI TOBACCO LITIGATION
Cause No. 94-1429

DEPOSITION OF DR. DAVID OWEN

Taken at the Hattiesburg Clinic, 415 South 28th Avenue, Hattiesburg, Mississippi, on Thursday, November 7, 1996, beginning at 9:00 a.m.

APPEARANCES:

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ALSO PRESENT:

MR. GARY W. WILLIAMS

REPORTED BY:

KAREE H. MULHOLLAND
CERTIFIED SHORTHAND REPORTER #1255

I-N-D-E-X

DR. DAVID OWEN
having been first duly sworn, was examined and testified as follows:

EXAMINATION

BY MR. KEMNA:

Q. Doctor, we introduced ourselves off the record, but would you go ahead and give me your name and office address for the record, please?

A. David M. Owen. Office is 415 South 28th Avenue, Hattiesburg, Mississippi 39402.

Q. Doctor, I represent Lorillard in this matter, and this deposition is scheduled from nine o'clock in the morning until five in the afternoon. We'll take a break whenever it is convenient for you throughout the day, and, of course, the appropriate break for lunch.

Have you had your deposition taken before?

A. Not on this matter.

Q. On any matter, have you had your deposition taken?

A. Yes.

Q. Would you describe for me what types of matters that you've had your deposition taken before?

A. One matter was an asbestos suit that I was the treating physician. Another was a -- serving as an expert witness in a medical malpractice suit. Another was a medical

malpractice suit in which I was involved, and that might be all.

Q. In the matter where you served as an expert witness in a medical malpractice lawsuit, for which party did you serve as an expert?

A. For the defense.

Q. Do you recall the name of the law firm that you worked with on that matter?

A. It was -- the lawyer was Tom Stennis, who is now deceased, and Bob Ramsay was associated with them. They're a functioning law firm in Hattiesburg now.

Q. In the asbestos lawsuit that you testified in, approximately what date was that testimony taken?

A. That was ten to 15 years ago. Probably ten years, I guess.

Q. Do you remember the name of the lawsuit?

A. No.

Q. Do you remember the name of the patient that was involved?

A. I've forgotten the name of the patient.

Q. In the medical malpractice lawsuit that you mentioned that you were involved in, does that mean that you were one of the named parties in the lawsuit?

A. Hattiesburg Clinic was a named party. I was involved.

Q. So you as an individual were not named --

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A. I was not named.
Q. -- as a defendant.
A. That's right.
Q. Will you describe for me the nature of the injury involved in that medical malpractice lawsuit?
A. The claimed injury?
Q. Yes.
A. The patient had a deep vein thrombosis in the subclavian vein which was rather severe. She was placed on streptokinase to dissolve that clot. And after removing -- after discontinuing the streptokinase, two days later, she suffered an intracerebral hemorrhage, and subsequently had neurological damage from that.
Q. What was your role as someone testifying in that lawsuit? Were you a treating physician?
A. I was treating physician.
Q. Was the injury alleged to be the result of or a complication of some type of procedure that was being performed on the patient?
A. It was allegedly due to the streptokinase.
Q. Was the administration of the streptokinase a form of treatment that was ordered by you as a treating physician?
A. It was.
Q. Now, apart from deposition testimony, have you ever testified at the trial of any

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matter?
A. I have.
Q. Would you describe for me what types of cases that you were involved in testifying at trial?
A. One was a patient of mine who, I believe, was involved in some type of accident and had a neck or back injury or something. I don't remember. It's been 25 years. And I had to testify at that case.
I had another criminal case in which a patient stole prescription pads and forged narcotic prescriptions. I had to testify at that case.
And at this last case I mentioned, a medical malpractice case, I testified as a witness for the plaintiffs in a suit against the hospital. I don't remember any others. Oh, yes. That other medical malpractice where I was an expert witness, I testified.
Q. In the lawsuit against the hospital where you were involved as a witness as a treating physician, you say that your testimony was presented through plaintiffs' case?
A. Plaintiff subpoenaed me to testify.
Q. Were you otherwise cooperating with the plaintiffs' counsel in the prosecution of that case?
A. I testified.

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Q. You otherwise were not working with plaintiffs' counsel --
A. No.
Q. -- in any way.
A. Had no conversations with plaintiffs' counsel, other than on the witness stand.
Q. In the medical malpractice matter where you performed as an expert witness, what was the alleged injury in that case?
A. Failure to diagnose breast cancer.
Q. And you were testifying on behalf of the defense in that case; is that --
A. That's right.
Q. Did your testimony in that case relate to allegations against another physician or a hospital? Who was the defendant in the case?
A. The physician.
Q. Physician? Is that another physician here at the Hattiesburg Clinic?
A. He was not at that time. He has since joined the Hattiesburg Clinic and has since retired.
Q. What is the name of that physician?
A. Campbell.
Q. What is his first name, if you recall?
A. I don't remember.
Q. Approximately when did you provide that testimony?
A. It's difficult to remember. I would

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guess eight or ten years ago.
Q. We've discussed both matters in which you've provided testimony at deposition and at trial. Does your description of those matters -- has that been inclusive of every bit of testimony that you've provided in either deposition or trial?
A. I don't understand your question.
Q. I'll rephrase it. The matters that you've already described that you testified at deposition or at trial, are those all the matters?
A. I don't remember any others.
Q. Apart from litigation that you participated in as either a deposition witness or a trial witness, have you been involved in any other litigation, either consulting for one or the other party or having been named as a party to the lawsuit itself?
A. I was named as a party 20, 25 years ago. The case was thrown out of court by the judge. The attorney threatened to appeal. It was in federal court. Threatened to appeal to the Fifth Circuit, and the insurance company and the hospital wanted to settle, which they did for $500.
Q. I take it that that was a medical malpractice lawsuit?
A. Medical malpractice. That's right. And another matter, I was a plaintiff in a lawsuit.

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And in recollection now, I must have had a -- I must have been deposed in that, too, since I was a plaintiff, but I don't remember being deposed.

Q. What was involved in that lawsuit?

A. It was a lawsuit against -- malpractice against an accountant. About 15 plaintiffs.

Q. Do you recall the name of the accountant that the lawsuit was filed against?

A. No. I remember his assistant, but I can't remember his name.

Q. Who was the lawyer that represented you in that matter?

A. It was mainly a lawyer out of Jackson, whose name I don't remember, and there was one in town, George -- I can look it up in the phone book, but I can't remember his last name. George. I don't remember his name.

Q. In the matter that you described as a malpractice lawsuit against you roughly 20 to 25 years ago, what was the allegation against you in that lawsuit?

A. The main allegation was one of family members saying I refused to refer the patient to another facility, and actual fact, the husband told me not to refer the patient, and I didn't, and the children sued, and they eventually wandered away, and the lawyer was left with no plaintiffs, and that's when the case was thrown out of court.

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Q. Is there any other litigation that you have participated in as a consultant or expert witness but just simply have not yet provided testimony?

A. I am supposed to be involved with another tobacco lawsuit, but I have not had -- been no deposition and no real contact with it.

Q. Do you know what the name of that lawsuit is?

A. It's Burl Butler in Laurel. I am treating physician. I was treating physician.

Q. Is your role in the Burl Butler case to testify simply as a treating physician, or do you expect to provide expert testimony?

A. I don't know.

Q. Have you discussed the scope, the nature of your testimony with counsel in that case?

A. Not really.

Q. Are you participating in that case at the request of plaintiff's counsel?

A. Yes.

Q. Have you participated in the drafting of an expert report in the Burl Butler case?

A. No.

Q. And as you've mentioned, you have not otherwise discussed what the nature of your testimony may be in that case.

A. That's right.

Q. And by discussing the nature of your

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testimony in that case, I am referring to discussing it with plaintiff's counsel. You have not done that; is that correct?

A. Not really. They stopped by a time or two and talked, but we never really settled on anything specific about what I'm to testify about. It's mostly just inquiring, would I testify and matters like that.

Q. What lawyers have you met with on that case?

A. I have no idea. Lawyers come in and out. I don't remember their names.

Q. Have they left you business cards so that you could possibly --

A. Probably have, but I don't have them. I figure if they want me, they'll call me. I don't --

(Off the record.)

MR. KEMNA:

Q. Dr. Owen, I probably should have, and I'm glad that the court reporter mentioned this to you, but since you've had your deposition taken before and you've testified before, I assume you're very familiar with the process. And as you've already done, when you did not understand my question, you asked me to repeat the question. Please do that the course of the deposition. Within your field of medicine, there are many technical terms that if, for whatever reason, the

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question doesn't seem to make sense to you, please let me know. Otherwise, if you provide an answer, we'll assume that the question was understood.

And I know there's a tendency during the course of the deposition that once you get the sense of the direction I'm going with the question, you'd like to jump in and provide the answer. I would appreciate it if you'd let me get the full question out. That keeps the record clearer for not only the court reporter taking the testimony, but also others reading it later on.

MR. KEMNA: I'd like to have this marked as Defendant's Exhibit No. 1, please.

(Exhibit 1 was marked.)

MR. KEMNA:

Q. Doctor, I'm going to hand you what's been marked as Deposition Exhibit No. 1, ask you to take a look at that briefly, and I'll ask you some follow-up questions.

Doctor, have you ever seen this document, Deposition Exhibit No. 1, prior to this deposition?

A. I have.

Q. Have you made an effort to respond in producing documents consistent with the request for documents contained within this Notice of Deposition?

A. All documents are in the box right over there.

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Q. Okay.
MR. KEMNA: Let's go off the record for just a minute.
(Off the record.)
MR. KEMNA:
Q. Dr. Owen, the Defendants' Exhibit 1 entitled "Defendants' Notice of Deposition: Dr. David Owen" indicates that the documents were to be produced to me in Kansas City before October 31st. Is there a reason for why those documents could not have been produced then as opposed to today?
A. I didn't have them.
Q. Let's start with your participation in this case. When were you first contacted to participate in this matter of Attorney General Moore versus the various tobacco company interests?
A. I don't remember.
Q. Can you give me an approximate time when you were first contacted to participate as an expert?
A. It was a number of months ago, five or six. I don't know.
Q. Who contacted you at that time?
A. I don't know.
Q. What did that person, whoever it was, have to say to you at that time about this lawsuit?

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A. It was a lady, a lawyer who was involved in the Butler lawsuit, I believe, and since I was testifying in that lawsuit, she asked if I would be willing to testify in this one. I told her I would.
Q. Was that a conversation over the phone or in person?
A. I believe it was in the office.
Q. Do you remember approximately how long that meeting took?
A. Not really. I believe maybe 15 minutes, 15, 20. I don't know.
Q. Was the scope or the nature of testimony that you would be expected to provide in the Moore case, the attorney general's action, discussed between you at that time?
A. I believe she asked if I would testify regarding treatment of cancer, of lung cancer.
Q. So it's your understanding that your testimony would be limited to lung cancer as opposed to other cancers.
A. To the best of my recollection.
Q. Is that your recollection here today, current recollection, about the scope, the nature of your testimony?
A. That's right.
(Off the record.)
MR. KEMNA:
Q. And so your current understanding of your

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testimony in the Moore case is that you will be testifying as to the treatment of lung cancer.
A. That's right.
Q. And your testimony, then, will not relate to any other types of cancer.
A. As far as I know. I have not been specifically told, so I don't know that I can answer the question otherwise.
Q. We've mentioned that the first opportunity that you had to talk to anyone about this case was the number of months back that you described meeting with someone who you believe to be involved with the Butler case, a lawyer. What other times have you met with lawyers or any other individual to discuss the Moore case?
A. I really haven't had a discussion. The only contact has been maybe telephone to set up the deposition or a letter from the attorney general thanking me for testifying or some of the documents you see here. That's all I've had.
Q. Do you have the letter from the attorney general?
A. No. I filed it.
Q. Is it accessible from your files?
A. No. In the trash.
Q. The circular file.
A. That's right.
Q. Would you describe for me how many times you've actually had contact with anyone prior to

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today regarding the Moore case?
A. Hasn't been very many, and most -- and much of the contact has been through my office nurse, not through me. I doubt if I've talked to anybody over a couple of times, and that's basically just set up appointments or whatever. There's been no discussion about the case.
Q. At what point did you receive the materials that you have produced here today pursuant to our Notice of Deposition?
A. Over the past week.
Q. What was the first day that you had these materials made available to you?
A. It may have been Thursday or Friday or something like that, last week, and then additional material, maybe Tuesday.
Q. Have you reviewed all of these materials that you have produced here today?
A. No.
Q. Of the materials that were included within this box that you pointed out earlier, what materials have you actually read?
A. I have read, I believe, all of the depositions. I have not read the other material, information material, I gather, which appeared not to be germane to my testimony.
Q. Just to make it clear exactly what you have reviewed, I'm going to itemize the depositions and ask you questions about them. You

have reviewed the deposition of David Burns in the Rogers v. R. J. Reynolds matter, deposition testimony dated October 7, 1994?
A. Yes, I read that.
Q. Have you read the deposition of Dr. Richard Peto in the Moore case, deposition dated September 17 --
A. I did.
Q. -- 1996? Have you been provided with any other days of deposition of Dr. Peto other than what you've provided here today?
A. No.
Q. Have you reviewed the deposition of Dr. Mark Green in the Moore matter dated October 10, 1996?
A. I have.
Q. And have you reviewed the deposition of Dr. Allan Feingold in the Grady Carter v. Brown & Williamson matter, initial day of testimony dated June 25, 1996?
A. I did.
Q. And that includes his entire deposition that runs through page 562?
A. I'm not sure I read every word of it.
Q. But you, at least, reviewed the entire deposition?
A. I reviewed most of -- I read most, if not all of it. Again, it did not appear to be germane, and I may have quit before I got to the

end.
Q. Also note that there are Defendant Exhibit Numbers 6, 7, 15, and 21 attached to the Dr. Feingold transcript. Did you review these exhibits as well, Doctor?
A. No. I glanced at them.
Q. Doctor, this appears to be all of the testimony transcripts contained within that box. Have you reviewed any other testimony in preparation for this deposition?
A. No.
Q. Now, you indicated earlier that there were materials within this box that you were provided with but that you may not have reviewed because of questions in your mind regarding their relevance to your expected testimony. I'm going to itemize for you some of these materials and ask you whether you've reviewed them.
First item is entitled "Cigarettes Don't Cause Cancer." This is by Norwood S. Wilner. Did you review that document in advance of the deposition?
A. I did not read it.
Q. Another document entitled "Report on Policy Aspects of the Smoking and Health Situation In U.S.A." dated October 1964, with a first page -- well, I'll give the range -- a document number range of 1003119099 through 1003119135, containing the mark, "Produced In Butler v.

Phillip Morris, Et Al." Doctor, did you read that document?
A. No.
Q. Among these materials that you've produced here today, tell me, if you would, who provided the materials to you.
A. Plaintiff's attorney.
Q. Specifically, who was the plaintiff's attorney that provided these materials to you?
A. I assume it was office of Ness Motley or whatever.
Q. Was there any particular name attached to, perhaps, a cover letter that --
A. There was a letter -- excuse me. There was a letter, I believe, in that material you had, unless it got thrown away. Is that it right there?
Q. It might be on one of those other ones.
A. That's -- Is that the Green one? That's the last one that came. That did not come with the box. If it's not there, it may have gotten discarded.
Q. Doctor, there's a Fed Ex airbill attached to the lid for this box that these documents were contained in, and it indicates that sender's name is Susan Hoffman from the Ness Motley firm. That would be the individual who sent the materials to you?
A. I believe that's right.

Q. And the only materials that you received in a separate package were those kept together by a rubber band with a cover letter to you from Kathryn Wilkinson of the Scruggs, Millette firm in Pascagoula?
A. That's right.
Q. These materials were apparently faxed to you?
A. No. They were received in a Fed Ex box.
Q. Well, that is this -- the separate package with Dr. Green's deposition appears that they may have been faxed to you?
A. No. They were in a Fed Ex box. I did not bring the box. It's at home if you want it.
Q. One other item I wanted to check with you --
A. That's not this phone number.
Q. There are a few other items here I just want to check to see if you've reviewed these in advance of this deposition today. Next item I have is three pages stapled. The cover page is entitled "New Cigarette Prototypes That Heat Instead of Burn Tobacco," and the page immediately after that is entitled "Matters From Group R & D Conference Referred To CAC.III." Take a look at that, Doctor, and tell me whether you've read that.
A. No, I did not read it.
Q. Another item that was clipped to that

document just mentioned is dated May 1, 1972. It's to Horace R. Kornegay from Fred Panzer, has a marking "Plaintiff's Exhibit No. 1105" with a document No. T0020999. Did you read that, Doctor, in advance of the deposition?

A. No.

Q. Doctor, you also had within that box of materials you produced today a textbook entitled "Comprehensive Textbook of Thoracic Oncology," edited by Aisner, Arriagada, Green, Martini & Perry. Is that your personal copy of that textbook?

A. It is.

Q. And you included that within this box of materials for what reason?

A. You asked for everything I had referred to, and I glanced through that.

Q. Doctor, is that a textbook that you would consider authoritative within the field of oncology?

A. Not necessarily.

Q. Is that a textbook that you regularly rely on in the conduct of your practice in the field of oncology?

A. No. I just received it and never read it.

Q. When did you receive that textbook?

A. Sometime recently. I wasn't here. A drug representative left it. I just found it one

day on my shelf.

Q. When was the first time that you -- rough estimation of when --

A. A couple of weeks ago.

Q. A couple of weeks ago is the first time you actually noticed it on your shelf.

A. That's right.

Q. The other textbook that you had contained in that box of produced materials was "Lung Cancer Principles and Practice" edited by Pass, Mitchell, Johnson, and Turrisi. Doctor, is that your personal copy of that textbook?

A. It is.

Q. And what was your reason for producing that textbook among these materials?

A. Same reason. I glanced through it.

Q. Is that a textbook you would find authoritative on the subject of lung cancer?

A. I find it an acceptable reference.

Q. Is that a text that you regularly refer to in the practice of your field of oncology?

A. No.

Q. Is that a text that you noticed in advance of two weeks of the deposition that you had in your library?

A. I did.

Q. Have you looked at this text over an extended period of time?

A. I have looked at it a couple of times,

probably.

Q. Did it contain information that you thought was particularly relevant to this lawsuit?

A. In what matter?

Q. In the Moore matter.

A. Relevant to my testimony?

Q. Yes.

A. Not a lot of help.

Q. Are these materials that you produced today all of the materials that you believe are responsive to the request for documents in Exhibit No. 1, Defendants' Notice of Deposition?

A. They're all the materials I have received from the plaintiff's attorney, except possibly an occasional letter I may have thrown away and the textbooks that I glanced through in preparation for this deposition.

Q. Doctor, have you prepared any documents in connection with your work with plaintiff's counsel on this case?

A. No.

Q. Have you participated in the drafting of any expert statement that may have been provided in this lawsuit regarding the nature and extent of your testimony expected at trial?

A. I read one that was prepared.

MR. KEMNA: Would you mark this as Exhibit No. 2, please?

(Exhibit 2 was marked.)

MR. KEMNA:

Q. Doctor, I'm going to show you what's been marked as Deposition Exhibit 2. Have you seen that document before?

A. Yes, I have.

Q. That document is entitled "Rule 26 of Expert Statement," indicating "David Owen," with a section on "Subject Matter and Anticipated Testimony," and then following that, "Summary of Grounds." Did you discuss with plaintiff's counsel what aspects of your testimony to be included in this report?

A. No.

Q. Just to make sure that we are accurate in what is contained within the scope of your testimony expected at the trial of this matter, I want to take a look closer at the wording of this report and refer back to our earlier discussion. You expect to testify on the topic of lung cancer, that being the only cancer that will be material to your testimony; is that correct?

A. I don't know that it was ever specifically mentioned. I may have assumed it was lung cancer, since that's what the Butler case was about, and that's what led to this. My plan was to discuss lung cancer.

Q. Okay.

A. But since I have not had discussion with plaintiff attorney about it, I don't know.

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Q. So it's your position today that the scope of your testimony is limited to lung cancer.
A. As far as I know.
Q. And you are not prepared to discuss expert opinions of matters relating to cancers other than lung cancer.
A. That's right.
Q. I note that on Exhibit 2, the specific wording of the statement indicates you will testify concerning various issues involved in the diagnosis and treatment of tobacco-related cancer. By the wording, tobacco-related cancer, is that intended to describe simply that cancer which has been statistically associated with cigarette smoking?
A. Since I didn't write it, I don't know what the thought was behind it.
Q. Well, let me ask you this, Doctor. Since you did not write this statement and you have not discussed the content of the statement with plaintiff's counsel in this case, does this statement, apart from what we've already discussed as lung cancer being the only disease process that you will testify about -- does the statement otherwise accurately represent your understanding of your expert testimony in this case?
A. It does.
Q. Let's go down the items on the page under

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that introductory paragraph. The first item indicates "Methods of diagnosing the disease"; second item, "Types of treatment available"; third, "How the treatment is administered"; fourth, "Side effects of the treatment"; fifth, "Costs of the treatment"; sixth, "Prognosis following the diagnosis of the disease," and last, "Patient communications concerning the diagnosis, treatment and prevention, and the pain and suffering associated with the disease." Is that the entirety of your testimony regarding lung cancer that you would expect to provide in this case?
A. Yes.
Q. I note, Doctor, that there is no indication on this expert report that you will testify to the question of whether lung cancer is caused by cigarette smoking. By your last response, I take it that you are not testifying regarding the causation issue in this case?
A. I was not asked to do so.
Q. And so, that is not your intention to testify as to causation.
A. That's right.
Q. I take it, Doctor, that your intention not to discuss the issue of causation regarding lung cancer and cigarette smoking is reflective of the fact that you do not consider yourself to be an expert on causation of lung cancer?

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A. That's right.
Q. And that position applies to not only your participation in this lawsuit by the attorney general, Michael Moore, against the tobacco companies, but also would relate to any other matter in which exposure to tobacco smoke and lung cancer were at issue.
A. I can't answer that. I don't know.
Q. Doctor, do you currently have any affiliation with any university medical school or other teaching institution?
A. A loose relationship with the University of Southern Mississippi.
Q. Other than describing it as "a loose relationship," is there some type of a formal title or appointment that you have?
A. I have an appointment in the department of medical technology. I don't know what the title is, maybe associate professor or assistant professor or something. I did teach classes there in medical technology many years ago, but have not done so for a long time.
Q. Do you have any ongoing teaching responsibilities or -- perhaps not responsibilities, but just simply voluntary involvement with the University of Mississippi?
A. No.
Q. Doctor, I've had an opportunity to take a look at your curriculum vitae. Among the

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publications you have listed, I believe that the date of the last published paper was in 1990. Do you have any other publications that are not reflected in that curriculum vitae?
A. What was the name of that paper?
Q. I can tell you that the subject matter dealt with etoposide and cisplatin for the treatment of non-small cell lung cancer.
A. I don't remember whether there have been any since then or not. Do you have -- it seems like there's been another one, but I can't remember the name of it.
Q. Do you recall approximately what year that may have been published?
A. '92 or '93, something like that. I'd have to check and see.
Q. I'm sorry. You don't recall the subject matter of the publication?
A. No.
Q. Do you recall the journal that it may have appeared in?
A. No.
Q. Do you have any manuscripts that are in press currently?
A. No.
Q. Doctor, do you have any texts that you would consider authoritative in your field of practice or other fields of practice that you would refer to in your practice and field of

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oncology?
A. I have texts that I refer to. I don't necessarily feel they're authoritative. They may well be, depending on the subject matter. I'd have to see the individual article to see what I thought about it.
Q. Do you currently have DeVita's text, "Cancer: Principles of Practice of Oncology"?
A. I do.
Q. Is that a text that you would regard as reliable for you to refer to in your practice?
A. I read it periodically for specific items.
Q. Would you consider it the preeminent text within the field of oncology?
A. I don't know that I would say it's the preeminent. It may -- it's certainly the standard, I guess, for texts, and generally is a reliable text.
Q. Are you familiar with Dail and Hammar's text on "Pulmonary Pathology"?
A. No.
Q. Are you familiar with Thurlbeck and Churg's text on "Pathology of the Lung"?
A. No.
Q. Are you familiar with Aisner's text on "Comprehensive Textbook of Thoracic Oncology"?
A. No.
Q. What journals do you read or review on a

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regular basis?
A. Journal of American Medical Association, New England Journal of Medicine, American Journal of Medicine, Annals of Internal Medicine, Cancer, Journal of Clinical Oncology, Seminars on Oncology. I think that's it.
Q. I take it by your regular review of those journals that you would regard each one individually as a reliable source of medical and scientific information?
A. Not necessarily. It depends on the article, again. Some articles are later proven to be incorrect. You have to read them and understand them and apply them as they relate to your experience.
Q. Do you recall whether you've made any public statements which might be encompassed by speeches or prepared statements for press, for instance, or any other type of public statement that relates to cancer incidence and either cigarette smoking or environmental tobacco smoke?
A. It seems like we had a small public relations piece, maybe, for the newspaper or the clinic newsletter regarding causation of cancer some years ago. I don't remember the details of it.
Q. Do you have any record of the text of your participation in that matter?
A. No.

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Q. Apart from reviewing the selected materials that you produced here today and that we have itemized that you actually reviewed, have you done anything else in preparation for this deposition?
A. No.
Q. Doctor, have you ever smoked?
A. No.
Q. Has any member of your family ever smoked?
A. Yes.
Q. What members of your family are smokers?
A. Parents and two sisters.
Q. Are they currently smokers?
A. No.
Q. Doctor, I've noted that you're past president of the Mississippi division of the American Cancer Society.
A. That's right.
Q. Do you have any current or past membership in organizations that have as at least one of their positions discouraging cigarette smoking in society?
A. Not other than the American Cancer Society.
Q. No other organizations such as Stop Teen-age Addiction to Tobacco?
A. No.
Q. No other type of lobbying organization?

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A. I don't remember any.
Q. Now, Doctor, I ask you to bear with me on this because it may be a little tedious to you, but I want to make sure that we have a clear understanding of the scope of your expertise. You have already indicated that you're not an expert in the causation of lung cancer; is that correct?
A. That's correct.
Q. I'm going to ask you questions about a series of other types of expertise and whether or not you are an expert. Do you consider yourself an expert in the field of pathology?
A. No.
Q. Do you consider yourself an expert in the field of epidemiology?
A. No.
Q. Are you an expert in statistics?
A. No.
Q. Do you have any expertise in the fields of psychiatry or psychology?
A. No.
Q. Are you an expert in the field of pharmacology?
A. No.
Q. Do you consider yourself an expert in the field of psychopharmacology?
A. No.
Q. Are you an expert on addiction?
A. No.

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Q. Do you have any expertise on the design or manufacturing of cigarette products?
A. No.
Q. Do you consider yourself an expert on smoking and health?
A. No.
Q. Do you have any expertise in hospital administration?
A. No.
Q. Do you consider yourself to be an expert in medical economics?
A. I have an interest in medical economics. I don't know how -- what you would have -- how you would define "expert."
Q. Do you have any special knowledge of the field of medical economics such that you could provide guidance to those of your profession that do not have any special education or experience in that field?
A. Probably some -- at some -- some degree, but not totally what you might term "expert knowledge," some degree less than that.
Q. Do you consider yourself to be an expert on the operation and economics of the Mississippi Medicaid system?
A. No.
Q. Do you consider yourself to be an expert on the costs associated with the treatment of diseases that have been associated with cigarette

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smoking?
A. To some extent, maybe not to what you would classify an expert.
Q. You have knowledge of --
A. Knowledge of.
Q. -- of the costs, but you do not feel that you have any special experience or knowledge base that would qualify you as an expert to testify on the costs of treating smoking-related disease.
A. Some knowledge.
Q. Some knowledge, but not expertise; is that correct?
A. Quite possibly.
Q. Do you consider yourself to be an expert in the field of medical oncology?
A. Yes.
Q. Do you consider yourself to be an expert in the field of radiation oncology?
A. No.
Q. Do you have any expertise in the field of molecular biology or molecular epidemiology?
A. No.
Q. Do you expect to provide any testimony relating to the organization known as "CTR" or Council for Tobacco Research?
A. I'm not familiar with it.
Q. Doctor, in the course of your practice, do you see patients whose treatment expenses are reimbursed under the Mississippi Medicaid program?

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A. I do.
Q. Is it apparent to you in the course of treating these patients that they are indeed Medicaid patients?
A. What do you mean by that?
Q. The question really relates to how are they identified such that it becomes apparent to you in the course of treatment that they are Medicaid versus private pay patients?
A. They have a Medicaid card.
Q. Since your testimony is limited to the discussion of lung cancer, I'm going to try and limit my questions to that subject area. Have you treated lung cancer patients who are under the Mississippi Medicaid program?
A. I have.
Q. Do you have a feel or an opinion regarding what proportion of your lung cancer patients are under the Mississippi Medicaid program?
A. Not specifically. My total patient population is 13 percent Medicaid. I would think that the percentage of lung cancer patients may be a little higher than that on Medicaid, possibly as high as 20 percent. I don't have specific figures.
Q. Among those patients that are under the Medicaid program that are lung cancer patients, in what setting are they generally provided

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treatment?
A. Could be treated either at hospital, office or both.
Q. Is it fair to say, Doctor, that a substantial number of lung cancer patients that you treat are ambulatory?
A. Yes.
Q. And so that during the course of their treatment, they are dealt with on an outpatient basis but otherwise remain at home?
A. That's right.
Q. What proportion of your lung cancer patients would be referred to an institutionalized setting such as a nursing home?
A. Rarely.
Q. Do you currently have any patients that are diagnosed with lung cancer that have been placed in a nursing home facility?
A. I can't think of any offhand. There might be one or two.
Q. Would you expect in the general treatment of lung cancer patients in the state of Mississippi that those patients would rarely be placed in a nursing home facility for treatment?
A. Not necessarily. Other physicians may have a different experience.
Q. Do you have any personal knowledge whether other physicians would have any different experience than your own?

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A. Yes. I see patients -- patients medical oncologists are following might be less likely to wind up in a nursing home. Patients a family practitioner or general internist are seeing might be more likely. If they're not under active treatment, just receiving supportive care, they might well wind up in a nursing home.

Q. Among those patients diagnosed with lung cancer who would be under the Mississippi Medicaid program, would it be your practice to refer them to a nursing home facility for follow-up care?

A. Rarely.

Q. To your knowledge, would it be permissible under the Mississippi Medicaid system for those patients to be dealt with in a nursing home facility for follow-up care?

A. If they met the criteria for Medicaid, they could.

Q. Are Medicaid patients dealt with in any different manner than private pay patients in terms of the nature of the treatment setting for follow-up care?

A. You want to break that question down?

Q. Patients diagnosed with lung cancer who fall under the Mississippi Medicaid program, is there any difference in the way that those individuals would be provided treatment than a private pay patient?

A. No. There is a problem with treatment,

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not necessarily just with Medicaid. It's reimbursement for treatment. And we have to follow the guidelines that are set up either by Medicaid or Medicare or private insurance, all of which may be a little different as to what they will pay for, and we have to follow those.

Q. You've already indicated, Doctor, that you do not consider yourself to be an expert in the operation or the economics of the Mississippi Medicaid program. Do you have any knowledge regarding the demographic characteristics of Medicaid patients in Mississippi?

A. Explain your question.

Q. Have you made any special study or otherwise attempted to gain knowledge of what characteristics of people are included within the population of patients under the Medicaid system in Mississippi?

A. Well, poor people. They have to fall under certain income and meet certain qualifications to be eligible for Medicaid.

Q. Do they differ in any other respects from private pay patients for medical services, for example, in lifestyle characteristics or disease incidence?

A. Well, I'm sure they would, based on their poverty. Their lifestyle certainly would be different. As far as disease is concerned, sometimes they are sicker than private pay

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patients by virtue of the fact that they don't come in for medical care.

Q. So it's been your experience that Medicaid patients avoid coming to the doctor?

A. Not totally. I don't mean to imply that. Sometimes they come more often. If they know they can get it paid for, they'll come in for inconsequential things, but I think, generally speaking, this is a poorer group of patients, less educated usually, and they sometimes aren't aware of the seriousness of their problems and come in when it's too late, or come in with a lated disease, I should say.

Q. And this experience you've had with people coming in late in the course of their disease process, this would relate to lung cancer patients?

A. It could. Any cancer, but certainly lung.

Q. So, in fact, based upon your clinical experience with Medicaid patients who are diagnosed with lung cancer, oftentimes they do come in very late in the disease process.

A. I wouldn't say often. I would say they are more likely to come in late than a private pay patient, for instance.

Q. Now, you've mentioned that your knowledge of the Mississippi Medicaid population is really composed of your clinical experience, your

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anecdotal experience in dealing with the patients in your practice. Have you attempted to educate yourself regarding the general experience with the Medicaid population in the state of Mississippi?

A. I don't understand the question.

Q. Do you have any knowledge of the various aspects of the Medicaid population in Mississippi other than your personal clinical experience?

A. I have a little knowledge of it. I was on the board of trustees of the State Medical Association and chairman of the board for two years, and we dealt with issues of poverty in the state and access to medical care and the problem with Medicaid. And looking at it in those aspects, I have some knowledge of it. But do I have considerable knowledge? No. Most of my knowledge is my own experience in my own practice and the problems I have in dealing with Medicaid with my own patients.

Q. Have you made any independent study of health issues in Mississippi? This is a general question.

A. Have I personally done it?

Q. Yes.

A. No.

Q. Have you made any independent study of the economic issues of the State of Mississippi?

A. Not personally.

Q. Have you made any study of the incidence

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of smoking in Mississippi?
A. No.
Q. Are you familiar with any incidence rates of smoking in Mississippi?
A. No.
Q. From your prior response to my question about whether you have expertise regarding the Mississippi Medicaid system, I take it that you do not feel you would be in a position to state an opinion on whether smoking results in increased costs to the Mississippi Medicaid system over and above the costs that would otherwise be associated with the operation of the Medicaid program in this state?
A. I think I could make a statement that -- that if you include what appear to be tobacco-related diseases, an increased incidence of these diseases, it certainly then would increase the costs of the State Medicaid Commission, but other than that, I would have no factual knowledge of it.
Q. This would be your sort of gut reaction to the question, but not an expert opinion on the issue: is that correct?
A. It's not an expert opinion, as I have not delved into it and never run statistical studies of it.
Q. Doctor, what's your understanding of what you will testify to at the trial of this matter?

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A. My only understanding is what is on the piece of paper you've shown me.
Q. Would you describe that for me in your own words since you didn't draft that document you're referring to, Exhibit No. 2?
A. My understanding is, I'll be testifying regarding the treatment of patients with lung cancer, the prognosis, possibly something regarding cost, and complications of treatment, complications of the disease.
Q. Is that the entire scope of your testimony, as you understand it?
A. As I understand it right now, that's what I've been asked to do.
Q. Am I correct in assuming, then, you are not testifying as to the diagnosis of lung cancer?
A. That would be included in -- in what I mentioned.
Q. So it's both the diagnosis and treatment --
A. That's right.
Q. -- of lung cancer.
A. That's right.
Q. Doctor, how do patients make their way to your office at the outset? Is it primarily by referral from other physicians?
A. That's right.
Q. Are you ever in a position of being the primary care physician for patients?

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A. Occasionally.
Q. What proportion of your patients would you say are your patients by virtue of referral from other physicians?
A. Are you speaking of lung cancer patients now?
Q. Well, let's say patients as a whole, and then we'll talk lung cancer patients.
A. Well, greater than 95 percent would be referral.
Q. That's overall --
A. That's overall.
Q. -- patients.
A. And probably the same thing for lung cancer.
Q. Ninety-five percent of lung cancer patients would be there by referral.
A. Or greater or higher.
Q. In those patients, lung cancer patients that are referred to you, have they, in fact, had the diagnosis of their condition made before they see you?
A. Most of the time. Occasionally not.
Q. Is it fair to say the primary focus of your practice in the field of oncology is the treatment of cancers that have already been diagnosed by --
A. That's right.
Q. But to the extent that you still

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participate in diagnostics for conditions such as lung cancer, you consider that to be within your area of expertise.
A. Certainly. I might explain that. Many times I'm asked to see a patient, the diagnosis is not clearly established, and I would have to help the surgeon or the family practitioner or whoever the primary care is, letting them know what I need as far as a diagnosis to set a treatment program up. And so I would tell them what I need and help them in getting whatever needs to be done to make the -- to establish the diagnosis.
Q. Let's start with the diagnosis of lung cancer. When a patient comes to your office, what information do you need to make a determination of the diagnosis of that patient?
A. You're referring to an undiagnosed patient?
Q. Yes.
A. I would have to have a biopsy evidence that the patient, in fact, does have lung cancer, is the main thing.
Q. I know that you said that you are not an expert on the causation of lung cancer, but let's assume for the sake of these questions that you are interested in what the cause of an individual's lung cancer may be. In attempting to evaluate cause, you first have to define exactly what the disease process is. Is that a fair

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statement, Doctor?
A. That's correct.
Q. And in attempting to determine what that disease process is, you go through a series of diagnostic evaluations to arrive at the answer; is that correct?
A. That's correct.
Q. And you mentioned that a patient -- we're assuming now that this patient is going to be evaluated for lung cancer. You mentioned you would need a biopsy. Is it fair to say that the biopsy would be tissue from the bronchi or other areas within the lung tissue?
A. A biopsy, hopefully, from the malignant area itself, however it's obtained.
Q. And the malignant area would have to be within the confines of the bronchi or the lungs?
A. Within the chest. That's right.
Q. When you see a new patient and you're going to make a diagnostic evaluation of that patient, besides having the, you know, biopsy evidence of a cancer, what process do you take this patient through to evaluate them?
A. Well, if I'm seeing a patient regarding possibility of lung cancer, they obviously have had something before then to suggest it for them to be referred in. Usually, that would be an x-ray or a CAT scan or something, and the patient had presented to a primary physician or someone

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else the symptoms suggestive of some type of lung problem.
Now, usually, when you have a patient like this, they're referred to the pulmonary specialist, but occasionally, they're referred to me, since -- if the referring physician feels strongly it's a cancer, they refer them in. So you've already got the basic information, something on some test pointing to a problem within the chest: a nodule, a mass, or whatever.
At that time, I would take a history from the patient of his symptoms and at that time take an etiology history to some extent. I don't dwell on that, but whether they were smokers or how long or any contact with asbestos or any other known substance that might have a -- play a part in producing cancer, go through a complete review of systems, family history, social history, so forth, and do physical examination on the patient.
At the conclusion of all that, I would determine the best way to establish a diagnosis and then refer the patient to whoever I felt would be in position to accomplish what I felt -- feel should be done. If it looks like the patient should have a bronchoscopy, for instance, I refer them to a pulmonary specialist to get a bronchoscopy. If it's a peripheral nodule, for instance, I might go straight to the radiologist and ask him to biopsy that with a needle.

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At the time of doing all of this as well, once a diagnosis is established, I would complete the -- we call staging studies, and this would include a bone scan to look for spread of disease, blood chemistries, and probably a CAT scan to look at the abdomen for evidence of spread, and depending on the type of cancer would probably get an MRI of the brain to see if there might be disease there. And then when we would conclude all of this, we're able to set up a treatment program.
Q. Doctor, you mentioned that in the process of working up a patient, you would take a medical history which would include questions relating to etiology. You mentioned three -- I believe it was -- well, maybe more than three, but you mentioned, you know, taking a smoking history, questions regarding exposure to asbestos, and then, in general, any other substance that might relate to the presumed disease. Are there any other questions that you can think specifically that relate to the question of etiology of the disease that you would include in your history?
A. Not generally. My main emphasis is not on trying to figure out why they got it, it's to figure out how to treat them once they have it. The main use of a smoking history, for instance, if you have a nodule or a mass in the lung, if the patient has been a heavy smoker for many years,

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you'd be more likely to think in terms of the lung cancer; whereas, if you had a nonsmoker, you may be more likely to think it's some other type of illness. But you have to realize, these are really immaterial. You've got to get the biopsy to know what it is. And it's more for information than really any use -- any significant usefulness on my part.
Q. Can you think of situations where there is a remaining question of whether or not you indeed have a lung cancer and that the ultimate conclusion of whether or not the patient actually has lung cancer is influenced to some degree by the fact that they had a history of smoking?
A. Well, I think that's difficult to answer. The ultimate decision is the biopsy, and the biopsy really has nothing to do with smoking. I think there are times when we see things in the chest, and we are influenced to proceed one way or the other, depending on the smoking history. Yes, that happens.
Q. Now, Doctor, one of the questions that is answered by biopsy specimens in a pathology consult is if there is malignancy, what cell type that malignancy may be; is that correct?
A. That's correct.
Q. What are the cell types of cancer that occur in the lung?
A. Well, primarily, it depends on which

classification you want to look at. Primarily, it's a small cell lung cancer versus a non-small cell lung cancer. You can break down the non-small cell lung cancers into various squamous cell, adenocarcinoma, so forth. Then there are a lot of the large cell carcinoma, the bronchioalveolar, which is probably a subdivision of adenocarcinoma, and neuroendocrine tumors, of course, in all that, various things can occur, mesothelioma in the chest.

Q. Now, can sarcomas occur in the chest?

A. Sarcomas can sometimes occur in the chest.

Q. That's specifically in the lung?

A. They can come in soft tissue. Usually, they're in the chest wall when they occur, but yes, you could have one in the lung, but it would be very rare.

Q. Can lymphomas occur in the lung?

A. Lymphomas commonly occur in the mediastinum where the lymph nodes are. Yes, they can be in the lung tissue, but usually, it's in the lymph nodes. You can see a lymphoma with dissemination through the lungs, but they're usually started in the mediastinum or the hilar nodes or somewhere.

Q. Again, recognizing, Doctor, that you're not an expert on the cause of lung cancer, are you familiar with the statistical associations that

have been established or at least reported between certain types of lung cancer and cigarette smoking?

A. Generally.

Q. What cell types of lung cancer, to your knowledge, are in fact associated with cigarette smoking?

A. As far as I know, all of the major bronchial-type cancers have: small cell, non-small cell, squamous cell, adeno, bronchioalveolar, large cell, so forth, have all been associated.

Q. Now, part of your answer, Doctor, referred to the cell types that would be based in the bronchi or bronchioles. Is that reflective of your sense that it is centrally located cell types that have been associated with cigarette smoking?

A. Well, some peripheral ones as well. The adenocarcinoma can be more peripheral, and it has a relationship, but I think, primarily speaking, that most of them are centrally located as most primary bronchogenic carcinomas are centrally located.

Q. Are you familiar with literature that raises question regarding whether peripherally located cancers of the lung are caused by cigarette smoking?

A. I'm familiar with some controversy.

Q. Would you agree that in the midst of this

controversy regarding peripherally located cancers of the lung that, currently, one could not conclude that cigarette smoking causes peripherally located cancers of the lung?

A. I believe that's outside the scope of my deposition; is it not?

Q. Well, I take it from that response, you prefer not to express an opinion on that matter.

A. Well, I'm not being deposed about etiology.

Q. Another way of saying that is you don't have an expert opinion on that issue.

A. I don't have an expert opinion on that issue.

THE WITNESS: Why don't we take a break for a few minutes?

MR. KEMNA: Sure.

(Off the record.)

MR. KEMNA:

Q. Doctor, you mentioned that the objective you have in evaluating a patient is primarily treatment. Do you make it a general practice when diagnosing lung cancer in a patient to make a comprehensive evaluation of other organ systems to affirm that it is indeed a primary to the lung?

A. Yes.

Q. What type of measures do you take in your practice to assure yourself that it is indeed a primary cancer of the lung?

A. Well, I think most of the time, it's a pathological diagnosis. The pathologist can tell us if this is a primary lung cancer or not. There are some times there could be some confusion, especially with adenocarcinomas which could originate in other organs, specifically lung, for instance, or GI tract or whatever. And then, occasionally, there's some question about whether it's a primary or secondary. But most of the time, if the tumor orig- -- seems to originate pathologically in a bronchial passage, you can assume it's a primary in that area. A metastatic disease is usually more out in the lung tissues, and it can sometimes involve the bronchus itself.

Q. And when you say, metastatic disease is more out in the tissues, you're talking about the periphery --

A. Periphery --

Q. -- of the lung.

A. -- of the lung. It can be central, but it's usually not involved at the bronchus itself. But everything is statistical in medicine. It sometimes can do that. And sometimes it can be confusing. When you can see a metastatic tumor from somewhere else that's going to the bronchus, then it can be confusing as to whether it's a primary or secondary, but most of the time, the pathologist can tell us which it is, if he gets a good specimen, I'll say, surgically. If it's just

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a needle biopsy, though, he can't always -- can't always tell. But there are a lot of mark or stains that pathologists use to help determine the origin of a tumor. If it looks like it could be metastatic, then we look other areas, and these other areas that we -- I've looked at with the initial workup, but most of my initial workup is primarily to see if that primary lung cancer has spread other places.

Q. So most of the time in evaluating a patient, you're not exploring the question of whether the primary might have originated in another organ.

A. Well, that depends on how the patient presents and what the pathology looks like. If the x-ray and scans are compatible with the primary origin, and pathologically, it looks and appears to be a primary lung cancer, then we're not really looking other areas for primaries. We may be looking other areas for metastasis in these other areas we look at. But, for instance, on a clear bronchial adenocarcinoma, we don't do endoscopy of the colon to see if it could be something from down there that spread in the absence of symptoms, because it would be very unusual for a colon cancer to spread to the bronchus and look like a primary cancer there.

Q. But in the course of the workup on the patient, it is not unusual for a CAT scan to be

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performed on the individual?

A. They're frequently done.

Q. And is that a whole body CAT scan that's conducted?

A. In my practice, it usually is, since we're usually looking at the lung to get a better picture of where the tumor in the lung is, and then looking to see if we see a spread into the abdomen. Primarily, the liver and sometimes the adrenal glands are common areas that the lung cancer will spread to.

Q. Would you agree that metastatic neoplasms to the lung are the most common tumor found in the lung?

A. I don't know -- I don't know whether they are or not. I would think it's quite likely they are, but I have not seen a figure that says.

Q. Do you often see patients in your practice where they present with a tumor in the lung that, in fact, is a metastasis from another organ?

A. Certainly.

Q. So I take it that at the outset, in trying to make some determination of the possible cause of the cancer, it's important to know fundamentally whether you're dealing with a primary lung cancer or a cancer metastasized from some other site.

A. That's right.

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Q. And the answer to that question can only be arrived at through a sufficient workup medically, leading to a clinician's conclusion that, in fact, it is a primary cancer of the lung.

A. Well, it depends on what you mean by "sufficient."

Q. Is it true that virtually any malignancy at a non-lung site can metastasize to the lung?

A. Most of them can, but there are a number that usually don't, but there are -- most of them.

Q. Let me ask you some follow-up questions to that general question. Do breast cancers spread to the lung?

A. Commonly.

Q. Colon cancers spread to the lung?

A. Commonly.

Q. Stomach cancer?

A. Yes.

Q. Does pancreatic cancer spread to the lung?

A. Yes.

Q. Does kidney cancer spread to the lung?

A. Yes.

Q. Does malignant melanoma spread to the lung?

A. Yes.

Q. Does prostate cancer spread to the lung?

A. Occasionally.

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Q. Does liver cancer spread to the lung?

A. Sometimes.

Q. Does thyroid cancer spread to the lung?

A. It can. I think it's fairly rare, but it can.

Q. Does adrenal gland cancer spread to the lung?

A. Yes.

Q. How about cancers of the male and female genital tracts: can they spread to the lung?

A. Yes.

Q. That would include cancer of the cervix?

A. Yes.

Q. Doctor, are you familiar with some of the epidemiological studies that have been conducted on various risk factors and lung cancer?

A. Vaguely.

Q. Are you familiar with the fact that studies relating to lung cancer often rely upon death certificate data to generate the information necessary to establish some statistical association?

A. Not specifically, but it wouldn't surprise me.

Q. Do you personally fill out death certificates on patients who die as a result of their disease process, specifically lung cancer?

A. Yes.

Q. What type of information is included on a

death certificate relating to the death of a lung cancer patient?
A. You mean, what do I fill out?
Q. Yes.
A. What part I fill out?
Q. Yes.
A. I sign my name as the -- as either certifying or attending physician, put the date, my license number. Then there's a list of the three blanks for cause of death, the primary cause of death, and then it says something to the effect, due to or -- No. 2, or due to No. 3. Then there's a blank under that saying other conditions the patient has, but not necessarily related to death.
Q. In the primary cause of death line that's filled out on the death certificate, if a patient was diagnosed with lung cancer and you believe that to be the primary cause of death, what do you put on that line?
A. I would put lung cancer.
Q. Do you ever indicate the specific cell type of lung cancer?
A. Sometimes, but not all the time.
Q. And according to practice, that is not considered a necessary item of information on death certificates, is it, Doctor?
A. That's right. If the certificate is filled out inadequate, the health department will

send it back and want specific information. They never send it back for that.
Q. Doctor, would you consider it sufficient in attempting to make some kind of a causal conclusion between a particular lung cancer and some exposure, whether it be cigarette smoking or something else, that you could only have information available on the death certificate and the knowledge of a history of exposure and you could conclude based on that the causation of the disease?
A. Repeat your question.
MR. LEWIS: Is this a causation question?
MR. KEMNA: Can you read that back?
(Question read.)
THE WITNESS:
A. That's a difficult question. I think a simple answer would be no, you can't. You have to have more information than that. You'd have to have population studies or whatever to add to it, but just to know a patient was a smoker and died with a lung cancer doesn't necessarily mean it caused a lung cancer.
MR. KEMNA:
Q. Would you need to know more information about that individual patient, for instance, having the opportunity to review the medical records that document the diagnostic process, the

entire workup of the patient?
A. Well, you have to have a lot more than just a death certificate. I think death certificate data is only good for large scale epidemiological studies, but not specifically for an individual patient.
Q. How would you consider death certificates to be sufficient for the purpose of a large scale epidemiological study if it is insufficient as a basis of information to determine causation on an individual by individual basis?
A. And if you're looking at a study to see how many people died with a kidney cancer, for instance, almost always the death certificate is going to have kidney cancer on there. Now, they may say the patient actually died of pneumonia or something else, but then that other blank down there that says other conditions should -- they should have the cancer, if the patient had a significant illness like that.
So I think you can get population studies of the -- generally, of the incidence of a particular cancer by looking at death certificate diagnoses. They're not going to be exact, but it's maybe the closest thing we can do without a very expensive hospital by hospital, case by case review to get more definitive information.
Q. And by collecting that death certificate information and generating some idea of the

incidence of, for instance, lung cancer, you could, by going back and looking at all of the individuals for whom death certificates have been filled out, collect information on smoking history. You would then attempt to make some association statistically between the two; is that correct?
A. You're not going to get that off the death certificate. You'd have to go back to case reports for each patient, have a smoking history.
Q. But the outcome of the epidemiological study would be some attempt at determination of an association between the incidence of the disease and the factor at issue, for instance, cigarette smoking; is that correct?
A. It could be.
Q. Do you agree that establishing simply a statistical association between a disease and a particular exposure is not the same as having established cause and effect?
A. Well, it's one thing that could enter into establishing a cause and effect, but it would take other information in addition to that, a summation of information.
Q. What other types of information would you assume might be necessary in order to make some kind of a causal attribution?
A. Well, now, again, you're getting off on the periphery of my expertise, and I can only give

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my opinions on what I think as a non-expert on etiology. I would think you would need information regarding the carcinogenesis of a particular compound. Can you show and test animals, for instance, that it produces malignancy of those animals? You need information like that. You would need information from pathology on how it affects the tissue itself, in addition to -- if you can, show some actual etiology such as the asbestos and mesothelioma where you could see asbestos fibers in there.

As far as smoking is concerned in causation of lung, I don't know pathologically what you see as far as tars or whatever in cancer tissue itself to indicate an etiology. Again, I have no knowledge of that.

Q. But it's your inclination in considering the question of causation that laboratory studies that would include the study of the response in animals to the same type of exposure that we're talking about in humans would be important in the course of trying to draw some kind of conclusion about causation?

A. And, again, I'm not an expert. I would say it would be very helpful in it, but I think there are probably other ways to do it statistically, looking at other factors that -- which you would not necessarily have to have that, but in my mind, it would be very helpful if you

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could demonstrate it. And the more evidence you have to be certain of cause and effect, I think the more sure you can be of the fact.

Q. And what you're referring to is making some kind of a judgment in view of all of the evidence that you can pull together on a particular exposure and a disease.

A. That's right.

Q. Would you agree with the statement that true primary bronchial adenocarcinomas are rare?

A. Not that I know of. I'm not aware of them being very rare.

Q. Would you agree that most lung adenocarcinomas are peripheral in location?

A. Many are peripheral, if not most.

Q. Would you agree that it's not correct to classify an adenocarcinoma of the lung as a bronchogenic carcinoma?

A. No. I would call it a bronchogenic carcinoma. I believe it's listed under bronchogenic carcinomas in most of the literature I've read.

Q. Are you familiar with the data that seems to support -- let me rephrase that. Are you familiar with the data that shows an increase in the incidence of adenocarcinoma of the lung over the past, roughly, 40 years?

A. How many years?

Q. 40.

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A. 40?

Q. 40.

A. I'm not sure about 40. There has been an increase in adenocarcinoma.

Q. Do you agree that adenocarcinoma back in the mid 1960s was not considered the predominant cell type of lung cancer?

A. Yes.

Q. Would you agree that today that adenocarcinoma is considered the predominant cell type of lung cancer?

A. I don't know whether it is or not.

(Off the record.)

THE WITNESS:

A. I should clarify that answer slightly. I don't always pay a lot of attention as to the non-small cell lung cancer as to whether it's squamous or adeno or what, because we basically treat them all the same way. So it doesn't make a lot of difference to me which particular type it is. So I just don't look at that. So that's why I can't really say, in my experience, whether I feel adeno is the leading cell type at this time.

MR. KEMNA:

Q. So you have no opinion on what might account for a change in the incidence of adenocarcinoma from 1965 to 1995 --

A. I don't have any personal knowledge of any reason for it. I have read and wonder about

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the -- since it is a significant increase in women, and there has been increase in smoking in women, whether that's related to it. I don't know.

Q. Do you consider bronchioalveolar carcinoma to be a subtype of adenocarcinoma?

A. Yes.

Q. Are you aware of whether it is bronchioalveolar carcinoma that is contributing to the increased incidence of adenocarcinoma over the period of time that I've described?

A. It has increased in incidence. I don't know what proportion of that versus other types of adenocarcinoma.

Q. You've read the deposition of Dr. Mark Green in this case?

A. I did.

Q. Did you read the testimony indicating that he and another individual at the University of California in San Diego recently published an article on bronchioalveolar carcinoma?

A. I saw that.

Q. Did you also see that the incidence of bronchioalveolar carcinoma as reported by Dr. Green now is as high as 24 percent of all lung carcinomas?

A. That's not been my experience. I find that hard to believe. I'd have to see his data and see what the local experience is, but we

rarely get a pathology report saying "bronchioalveolar carcinoma." It's hard for me to believe it's that high in incidence.

Q. Do you have any reason to expect that the experience in -- excuse me -- the incidence of bronchioalveolar carcinoma in Mississippi would differ in any respect from any other geographic location in the United States?

A. It probably does, for whatever reason, as the incidence of stomach cancer theories from Japan to U.S., ethnic groups within the U.S. I'm sure there are so many variables that go into it, that there may well be some differences, but I don't -- I don't know of it specifically.

Q. If you were interested in making some kind of a determination of the possible risk factors associated with lung cancer, for instance, in the state of Mississippi, would you be comfortable with simply extrapolating from a national data base of information about factors associated with lung cancer --

A. I think that --

Q. -- to the state of Mississippi?

A. I think that would be a place to start, but if you wanted specifically in Mississippi, you would have to look at specifically in Mississippi at risk factors, and it -- as you can -- as you can demonstrate them.

Q. And as you've already indicated, you have

recognized yourself that there are, in fact, distinct differences in the incidence of lung cancer in Mississippi and how it may relate to factors within the confines of the state of Mississippi.

A. I don't remember saying exactly that.

Q. Is that consistent with your view, based upon what you've read, your personal experience in your practice, or any other information?

A. Better repeat the question.

(Question read.)

THE WITNESS: You might need to go back further than that.

MR. KEMNA: I think he might want the earlier question, the one that preceded that one.

(Previous question read.)

THE WITNESS:

A. I still don't remember saying that. I don't know that I have specifically indicated any differences, other than the fact in relating to Dr. Green's paper, I don't feel that's my experience, but that's an off-the-cuff statement, not having looked at the pathology reports to see there's a bronchioalveolar carcinoma here.

MR. KEMNA:

Q. Do you have any knowledge of clusters of lung cancer incidence -- increased incidence of lung cancer that have occurred within the state of

Mississippi over -- over time, generally?

A. I believe there were -- the American Cancer Society -- well, I'm not even sure it's the American Cancer Society. There were statistical studies showing increased risk of cancer along the Coast and up the Mississippi River, and pretty significant incidence along the Delta and so forth. This was generally cancer, but I think it may well have related specifically to lung cancer as well, though I'm not positive about that. So that would be the only thing I could say, the possibility of it increased along the Coast and the Delta. That would be -- it's the same across the country, though. The Coast versus, say, Kansas, which is in the middle of the nation, increased risk of cancer, and, I believe, lung cancer.

Q. Now, you've described this increased incidence of cancer and included within cancer, lung cancer. On the basis of these geographic regions in the state of Mississippi, and I assume since you're talking Mississippi, also Louisiana, the Delta region --

A. That's right.

Q. -- have you read or are you otherwise knowledgeable of possible factors that are believed to be at play for this increased incidence of cancer in these regions of the state of Mississippi?

A. I have not read about it.

Q. Do any possible risk factors for this increased incidence of lung cancer in these regions of the state occur to you at this time for whatever reason?

A. Well, quite possibly, smoking. I tend to think maybe the deck hands, the river people, the port people may smoke a greater degree than people inland. I don't know if that's true, just it's an impression I have in seeing the people, that so many of them are smokers. But then you also have in the area of the asbestos exposure as well, on the Mississippi Coast specifically, and I assume there may be some on the river.

Q. Among the possible factors that you would consider, would you include the petrochemical industry?

A. Certainly possible, yes.

Q. Among the possible factors that you would consider, would you include sugar cane farming and refining?

A. I don't know about that.

Q. Are you familiar with the description of some peripheral lung cancers as scar carcinomas?

A. Yes.

Q. What is your description of a scar carcinoma?

A. Well, I think the description has changed. When I was in medical school, it really

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was suggested that these were carcinomas that developed at some scarring for whatever reason. I think since then, there may be a change in thought about that. Certainly, the scarring, the fibrosis, may well be developing in the adenocarcinomas after they're forming, rather than preceding it. I don't have much other pathological knowledge other than that.

Q. Would you agree with the statement that the question whether the scar precedes the cancer or postdates the cancer is controversial?

A. I would think so.

Q. Can previous pulmonary infections account for scarring of the lung parenchyma?

A. They are thought to do so. That's right.

Q. And among pulmonary infections, would you include tuberculosis as one condition that may result in scarring?

A. Yes.

Q. Are you familiar with other possible causes of scarring of the periphery of the lung, including the results of rheumatological diseases?

A. Of what?

Q. Rheumatological diseases.

A. You can get nodules in the lungs from rheumatological diseases.

Q. So that would be a yes, that is a form of scarring; is that correct?

A. Could be scarring.

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Q. What type of rheumatological diseases could result from that type of scarring?

A. Well, most any of them, but, of course, basically, the rheumatoid arthritis can. There are others as well, any of the collagen diseases.

Q. Can scarring of the lung be induced by the administration of any drugs?

A. You get a fibrosis from chemotherapy, from some chemotherapy drugs, but I don't really call that scarring. You can get a fibrosis from radiation, which, I guess, sometimes could -- over a period of time could result in scarring.

Q. Are you familiar with the literature that points to bronchioalveolar carcinoma as the cell type of lung cancer that is associated with scarring in the lung?

A. Yes.

Q. If you were to assume that a peripheral cancer of the lung was associated with a preexisting scar, does that tell you about the etiology of that lung cancer?

A. Not totally.

Q. Would the preexisting scar associated with a peripheral cancer lead you in any direction regarding possible cause of that cancer?

A. Well, again, you're asking a question I don't have the expertise on etiology. I would say it would suggest a bronchioalveolar carcinoma cell type, suggest the possibility it could be related

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to the scar, but I don't think you could exclude other causes.

Q. When you take medical history on a patient, one of the aspects of taking that history, you mentioned, was getting family history.

A. Yes.

Q. What's included within the subject of family history?

A. Well, family history, looking for familial diseases. Specifically, the patients fill out a questionnaire, and on it, it asks, anyone in the family have cancer, heart disease, diabetes -- I don't know what else is listed, several things like that.

Q. What's the purpose in getting that type of information?

A. Well, basically, to have a more complete knowledge about the patient.

Q. Does it have relevance to possible etiology for the lung cancer?

A. Very rarely.

Q. Are you familiar with what's known as familial clustering of lung cancers?

A. I'm associated with the term of familial lung cancer, which is very rare, not of clusters.

Q. And what is the definition of familial lung cancers?

A. Well, it would be several members of the

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family having lung cancer, basically. There are some rare genetic changes that can have a slight increase in the incidence of lung cancer within familial members, maybe have one, two, four, five times the rate you would expect otherwise.

Q. And on an individual by individual basis, if you were attempting to determine the etiology for the lung cancers in those individuals, familial history is important, as well as talking about other possible factors like exposures on the job, occupational exposures, and other factors that you have already mentioned; is that correct?

A. Yes. That's correct. But, again, I'm not involved in that.

Q. You also mentioned taking a social history. What is involved in the scope of a social history on a patient?

A. Occupational history, the history of smoking, of alcohol intake, education, these type things.

Q. Do you consider alcohol to be a risk factor for lung cancer?

A. Not really.

Q. What is the average age of an individual that is first diagnosed with lung cancer?

A. Average age for a patient with lung cancer is about 60.

Q. Among those individuals that you see diagnosed with lung cancer, are there any below

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the age of 35?
A. I don't remember seeing anybody below the age of 35 for lung cancer. Bronchogenic carcinoma, we're talking about.
Q. Well, if your answer is responsive to bronchogenic carcinoma, that's fine. Let's generalize it more to just lung cancer. Does your answer still apply to just --
A. Which included all the types --
Q. -- the description --
A. -- that we mentioned initially. Certainly, lymphomas are common in the -- in below 35. I've seen mesothelioma. Of all the primary tumors, I guess that would be the only ones I've seen.
Q. Has smoking ever been associated with mesothelioma?
A. I don't believe so.
Q. Has smoking ever been associated with lymphoma?
A. Not to my knowledge.
Q. And what you would generally recognize as smoking-related lung cancer, you have not seen such a patient below the age of 35; is that correct?
A. I don't remember any offhand. No.
Q. Based upon your knowledge of the epidemiology of lung cancer, do you know what the incidence of lung cancer is below the age of 35?

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A. No.
Q. Would you agree that it is extremely rare below the age of 35?
A. I would think so.
Q. Do you believe asbestos to be a cause of lung cancer?
A. No. Other than mesothelioma, now.
Q. Well, let's make sure that we have a clear understanding.
A. Well, I take that back, now. I think I'm wrong on that. There is an increased risk. I'm sorry. There is an increased risk of lung cancer, bronchogenic carcinoma, secondary to smoking, as the increased risk with asbestos, and the two together certainly is -- is much higher than the two added. There is an increased risk with asbestos.
Q. As you've repeated throughout the deposition, is it fair to say that that would not fall within your area of expertise because it relates to the causation of lung cancer?
A. It's not within my area of expertise, but it's within my reading. I keep reading this. I don't have any independent research knowledge of it, no.
Q. Not within your area of expertise, but from your continued reading in the literature, you have become aware of it.
A. Basic medical knowledge.

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Q. As to your medical knowledge regarding associations between various factors and lung cancer, I'm going to ask you a series of questions about the various substances or exposures and ask you whether or not you're familiar with an association between those factors and lung cancer.
Are you familiar with whether Radon is associated with an increased incidence of lung cancer?
A. It is.
Q. Are you familiar with any estimate of the number of lung cancers in the United States that might be attributable to Radon exposure?
A. It seems like I've read 5 percent or less.
Q. Does a number come to mind for you as to how many lung cancers would be diagnosed in the U.S. in a single year?
A. I believe the studies show about 150,000, 160, somewhere along in there.
Q. Are you familiar with any data associating bischloromethyl ether with increased incidence of lung cancer?
A. Yes.
Q. Does any number come to mind regarding the proportion of lung cancer that might be attributable to exposure to bischloromethyl ether?
A. No.

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Q. Are you familiar with whether acrylonitrile is associated with an increased incidence of lung cancer?
A. I believe it's been associated, but I have no figures on it.
Q. Do you know whether beryllium has been associated with an increased incidence of lung cancer?
A. I think it's been mentioned.
Q. Do you know whether formaldehyde has been associated with an increased incidence of lung cancer?
A. I'm not aware of that.
Q. Do you know whether welding fumes have been associated with an increased incidence of lung cancer?
A. I think there's some suggestion of that.
Q. Do you know whether occupational exposure with coal gasification industry is associated with an increased incidence of lung cancer?
A. Not specifically, but I would guess it might be.
Q. Do you know whether exposure to hexavalent chromium is associated with an increased incidence of lung cancer?
A. I don't know.
Q. Do you know whether exposure to nickel is associated with an increased incidence of lung cancer?

A. It's mentioned as one possible cause.
Q. Has silicosis been associated with an increased incidence of lung cancer?
A. I don't think so.
Q. Is smoking marijuana associated with an increased incidence of lung cancer?
A. I've never read anything that said it was. I would guess if someone smoked enough, it might.
Q. Are you familiar with any reports that lack of exercise is associated with an increased incidence of lung cancer?
A. Not specifically lung cancer.
Q. Any health effects that you're aware of that's associated with lack of exercise?
A. Well, certainly, it's a possibility it might increase heart disease, lack of exercise.
Q. Any incidence of cancers associated with lack of exercise?
A. Not that I know of.
Q. Are you familiar with data that associates a high fat diet with an increased incidence of lung cancer?
A. I've read about it.
Q. Are you familiar with a study conducted in Missouri that specifically associated a high fat diet in women with an increased incidence of adenocarcinoma?
A. No. Other than the fact that I think you

mentioned it in the deposition of Dr. Green, I believe. I'm totally unaware of it otherwise.
Q. Is it fair to say that the materials that you have reviewed in advance of this deposition, that you are relying upon those materials as forming a basis, at least one of the bases, for your expert opinions in this case?
A. Well, to very little extent, because, basically, my expert opinions are not regarding etiology, and most of the depositions were regarding etiology. So I really didn't have to pay much attention to that. I did get a little material out of the textbooks regarding what I think I'm supposed to be testifying on, but most of it is from my personal experience.
Q. Would you agree with the statement that the biological mechanisms involved in lung carcinogenesis are unknown?
A. The biological?
Q. The biological mechanisms.
A. I don't think they're completely known. I think there's a lot known about them. They're certainly not totally known. No.
Q. So that, to the best of your knowledge, more research would be required to arrive at the mechanism of lung cancer causation.
A. That's a non-expert opinion of mine.
Q. Let's talk about the treatment of lung cancer. You've indicated that your workup of a

patient, which includes medical history, pathology consults, radiology work, all these sources of information really are geared to defining for you, as the clinician, what the treatment should be in an individual patient; is that correct?
A. That's correct.
Q. You have also indicated that you only really differentiate in treatment between two major segments of lung cancer diagnosis, one being non-small cell lung cancer and the other being the small cell lung cancer; is that correct?
A. If you're talking about bronchogenic carcinomas, that's correct.
Q. With respect to small cell lung cancer, what is the expected mode of treatment?
A. Well, the primary mode of treatment for small cell lung cancer is usually -- basically, chemotherapy, with some indication for radiation and occasionally some indication for surgery.
Q. With respect to small cell lung cancer, has there been a significant change in the attitude towards surgical intervention as a means of treatment?
A. Well, I think there's a swinging pendulum. Years ago, before the nature of the small cell carcinoma was recognized, surgery was routinely done and was routinely very non-beneficial, as most patients had metastatic disease very early in the disease. So no matter

how small the tumor was removed, the patient usually was not cured.
Then it was found that these patients were very sensitive to chemotherapy and radiation. These became the primary mode of treatment.
Today, there is a return to looking at the possibility of resecting some of these patients, either early or late in the disease, if they have limited disease, to try to improve their chance of getting rid of the primary area there and trying to treat the possible spread with chemotherapy.
Q. What proportion of small cell lung cancer patients have surgical intervention for a mode of treatment?
A. For treatment?
Q. Yes.
A. Very few.
Q. Can you estimate a percentage?
A. I would guess 5 percent or less.
Q. What percentage of small cell lung cancer patients would be treated with chemotherapy?
A. Almost all.
Q. And that is because small cell cancer of the lung, in general, is very responsive to chemotherapy?
A. It's very sensitive to chemotherapy drugs. For palliation, usually. It's not usually

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a cure. It's usually a control.
Q. What proportion of lung cancer patients are treated with radiation therapy?
A. It would be difficult to say. I would guess somewhere in the neighborhood of 30 to 40 percent, maybe.
MR. KEMNA: Let's go off the record for just a moment.
(Lunch recess.)
MR. KEMNA:
Q. Doctor, I'm going to backtrack just a bit to a subject we discussed regarding the incidence of lung cancer in Mississippi that seems to be associated with the Delta region. Your familiarity with that issue, does that include any information that you may have come across regarding exposure to pesticides that arguably account for an increased incidence of lung cancer?
A. Now, there's been some indication or some suggestion that pesticides might play a role in causing certain types of cancer. I don't know if it's specifically lung cancer or not, but there has been an emphasis of some physicians in the Delta asking the Government to look into that to see what the possibilities are. I don't know if anything has been proven or how far along it is. It's a proposition.
Q. More specifically, are you familiar with arsenicals or arsenic-based pesticides as being a

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possible factor of the increased incidence of lung cancer --
A. I don't know --
Q. -- in Mississippi?
A. Excuse me. I don't know specifically about pesticides. I know arsenic is mentioned as being one of the possible etiologic agents of lung cancer.
Q. To your knowledge, has that been mentioned specifically with relation to the incidence of lung cancer in Mississippi?
A. Not in anything I've read.
Q. Doctor, before we broke for lunch, we were discussing the types of treatment relating to lung cancer, specifically small cell carcinoma of the lung. Chemotherapy was mentioned by you as one of the modes of treatment that was common to the treatment of small cell cancer of the lung. What type of chemotherapeutic agents do you use to treat small cell cancer of the lungs?
A. Specific names of drugs you're talking about?
Q. Yes.
A. Well, there are any number of effective regimens for small cell lung cancer. That's one of the beauties of small cell lung cancer, so responsive to so many things.
Standard treatment recently has been probably a combination of platinums, cis-platinum

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and VP16. Others have used a combination of carboplatin and Taxol being effective, and an older regimen called "CAV" or Cytoxan Adriamycin Vincristine was an effective treatment. There was a five-drug treatment before that out of University of Washington, oh, years ago that claimed a 90 percent response rate in this disease. In my hands, it never got that degree a response rate, but it never really gained favor across the country as these other treatments came along.
Q. In your description of the chemotherapeutic agents that have been used, you have indicated that there is some change in emphasis on certain drugs over time. Do you continue to see shifting in the attitudes of clinicians toward using certain chemotherapeutic agents in treating small cell cancer of the lung?
A. Yes.
Q. Is it fair to say that it has been consistent over the years that change occurs with respect to the choices made by clinicians in treating small cell cancer of the lung?
A. Yes.
Q. With regard to costs that may be associated with applying chemotherapeutic agents, because of the differences in chemotherapeutic agents that have been used over the years, would you expect that there was a significant shift in

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the cost of treatment due to those changes?
A. Quite probably. Newer agents usually cost more.
Q. So that the costs that may be associated with treating small cell cancer of the lung in, for instance, the 1980s, say mid 1980s, would not be representative of the costs associated with chemotherapeutic agents in the treatment of lung cancer today.
A. Probably be a difference. I couldn't give you a dollar difference in it, but certainly, it's reasonable to think there might be some -- a little more -- somewhat more expensive now than then, even if you forget about inflation, just on 1980 dollars.
Q. Has there been a difference in emphasis on radiation therapy for the treatment of small cell cancer of the lung over the years?
A. I don't know if there's a lot of difference in the emphasis of radiation. Once it was found that chemotherapy was so effective, it became standard treatment years ago, and radiation was used for specific means, such as in limited stage disease, if you had bulky tumor, try to consolidate a remission with the radiation to the small area of the tumor. And then it's been quite common to use radiation therapy to empirically treat the brain in small cell lung cancer. Since these tumors commonly spread to the brain, just so

ahead and treat them in case there are micrometastasis there, and when you do that, you're not as likely to have an obvious metastatic disease become symptomatic later. Although it can happen, the incidence appears to be less. But then there are studies now looking at the possibility of not treating the brain, just waiting. If you get a met, then treat at that time. So there are changes all along in chemotherapy and radiation, depending on as newer studies come in, come out, what looks like the best treatment for the individual patient for either or both of these modalities.

Q. What is the median survival time for a patient diagnosed with small cell cancer of the lung?

A. I don't know the median survival time. I think it depends on -- on whether the patient responds to treatment or doesn't respond to treatment. Of course, you could get figures to give you all of them. What the median is, I just don't remember what that is.

Patients who are -- did not respond to treatment, you're talking about a median survival time measured within a few months, probably in the neighborhood of, oh, anywhere from five to seven months, six or seven, maybe. Responders, we're seeing more and more living in the one- to two-year range. So we're seeing a -- I think, a

significant improvement in certainly quality of life and probably longevity as well.

And there are few patients actually cured of small cell lung cancer with the combination of chemotherapy and radiation. Shouldn't forget that. Percentage may be low, but they're there, and if it's you, it's 100 percent.

Q. Is that extent of survival from small cell cancer of the lung significantly greater today compared to years past?

A. Oh, yes, I think so. Figures are available. I just don't know them.

Q. Now, with regard to patients that are treated for small cell cancer of the lung, the treatment administered to those patients is primarily on an outpatient basis?

A. Could be inpatient or outpatient, depending on which regimen is used and where in the country you are and how it's done.

In my practice in Hattiesburg, Mississippi, the regimen I use, we could treat them either way, and usually, I will start them off with the hospital treatment, then try to bring them into the office.

If I use, say, the carboplatin, VP16, or carboplatin, Taxol, those -- those are -- both can be outpatient treatments. If you use cis-platinum -- some places might well give it as an outpatient. I give it as an inpatient,

primarily because it requires a lot of hydration. You have to give the patient, oh, maybe eight hours of hydration in addition to the chemotherapy. So you're talking about a prolonged day of treatment, and in our facility, we don't stay open that long to accomplish that and so pretty well have to put them in the hospital. And the treatment is a three-day with the VP16, say, and one day with the platinum. So I can put the patient in one day, give them the long treatment of platinum the second day and the carboplatin, and then the third day give them the carboplatin and send them home. So it's a two-night stay.

If I bring them in the office, not using the cis-platinum, I can use the carboplatin instead. I can make a three-day office treatment out of it.

Q. The extent to which hospitalization is utilized present day for the treatment of small cell lung cancer, is that more or less hospitalization than has been used in the past with regard to the treatment of small cell cancer of the lung?

A. Again, that's a big fluctuation, because in years past, we probably didn't put them in. We didn't use the platinum, didn't have to have a long hydration. So we could treat them in the office. When platinum came along, then we started hospitalizing them for it. And now we're getting

into drugs that don't have to have the hydration, so we're back to an outpatient. So it depends at what time and the scale you're looking at.

Q. So it's very important for you in making any kind of attempt to assign cost of treatment of small cell cancer of the lung to know what particular period of time you're talking about?

A. That's right, what time and what -- the way the treatments are going.

Q. Now, for non-small cell cancer of the lung, how does your approach to treatment differ from small cell cancer of the lung?

A. Well, the basic approach is different. And, basically, non-small cell cancer is a surgical disease, if it's localized enough you can do surgery, if it's stage I or II lung cancer and surgery is appropriate, if you can remove it. If it's found at time of surgery to have some degree of extension, you might add radiation or you might add radiation and chemotherapy to it. If the patient has up into stage III, and it looks like -- or certainly stage IIIB, a combination of chemotherapy and radiation, perhaps, could be given, shrink the tumor mass and possibly operate on the patient, or go the other way around and do the surgery and follow with chemotherapy and radiation, and it seems to be a more effective treatment than surgery by itself.

If the patient already has metastatic

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disease, then surgery is out of the question: localized radiation is out as the primary mode, and then you come to the chemotherapy itself as being the basic treatment and using radiation for spots of disease which did not respond well to the chemotherapy. So that would be the basic outline of how you handle a non-small cell.

Q. Does the mode of treatment differ within the category of non-small cell cancer of the lung depending upon the particular cell type of cancer that you're dealing with?

A. No.

Q. So that, for instance, with respect to an adenocarcinoma of the lung, you would not make any different decision with regard to the application of either chemotherapy, radiation or surgical intervention just based upon the fact that it's an adenocarcinoma?

A. All non-small cell bronchogenic carcinomas are treated the same way, basically.

Q. Is it possible for you to approximate what percentage of non-small cell cancer of the lung patients would receive chemotherapy as part of the treatment regimen?

A. The total number --

Q. Yes.

A. -- of non-small cell?

Q. Yes.

A. I would have a hard time doing that.

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Basically, if the patient has limited disease, has surgery, I never see them. So I don't know how many that are there.

Once they're patients I see, most of them are going to receive it. There would be a small percentage who don't. I would guess once I see a patient with a non-small cell lung cancer, probably -- probably 75 percent will receive chemotherapy.

Q. With respect to the use of radiation therapy, can you answer the same question regarding non-small cell cancer of the lung?

A. Probably -- probably more are getting -- well, it might be about the same, really, because there are more getting radiation therapy in the earlier stages that are not getting chemotherapy, but then at later stages, they're totally getting chemotherapy and not getting the radiation, necessarily. So they balance off. It would be about the same percentage. I wouldn't think a big difference in percentage. It might be a little larger percentage getting radiation, but -- of the total number of patients.

Q. What percentage of non-small cell lung cancer patients would receive surgery as a mode of intervention?

A. Figures are available, but I don't remember what they are. It's a -- I would guess somewhere around 25 percent, maybe.

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Q. Is it fair to say, Doctor, that it would be very difficult to generalize with respect to the treatment of lung cancer regarding the costs that would be associated with treating lung cancer from individual to individual?

A. Well, there's so many different ways of approaching the patient. There may be different costs from individual to individual, but I think that's -- the information is obtainable. If you look for it, you can get that information.

Q. Are you familiar with that kind of cost information?

A. I'm familiar with the cost information on patients I treat with the chemotherapy, but I'm not familiar with the cost of surgery or the cost of radiation.

Q. The reason you're not familiar with the cost of surgery or the cost of radiation is because that is treatment applied by practitioners other than you.

A. That's right.

Q. You have not attempted to conduct any type of study or otherwise review information with respect to costs associated with the treatment of lung cancer in the state of Mississippi.

A. Overall of the state?

Q. Yes.

A. No. I have done no survey.

Q. This, also, is maybe a subpart of that

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question. You have not made a study of, nor attempted to review information regarding the costs associated with the treatment of lung cancer patients under the Medicaid system for the state of Mississippi; is that correct?

A. I know what they pay for patients I treat.

Q. Yes. But in terms of the, for instance, aggregate costs that may apply to the state of Mississippi for the treatment of lung cancer under the Medicaid system, you have not reviewed that type of information.

A. No, I have not reviewed it. I think it's easily obtainable, though.

Q. Opinions with respect to the costs of the treatment for lung cancer under the Medicaid system for the state of Mississippi would not be within your area of expertise; is that correct?

A. I don't have a figure, but I'm expert enough to know how to get the information.

Q. But you do not have an expert opinion --

A. I do not have it today. No. Again, I know what my patients cost, but I do not know what the aggregate costs. I don't know how many patients there are, hospitalized, receiving chemotherapy, receiving chemotherapy in the office, but Medicaid has those numbers. It should be easy to obtain.

Q. And you have not been asked to offer an

opinion regarding the impact of the cost of treating lung cancer on the Medicaid system for the state of Mississippi.

A. No.

Q. Along those same lines, you have not been asked to offer an opinion on the fraction of costs associated with the treatment of lung cancer under the Medicaid system for the state of Mississippi.

A. No.

Q. And you do not expect to offer an opinion on that topic; is that correct?

A. I would think they would have somebody who had more knowledge than myself to do it.

Q. Doctor, if someone came into your office as a new patient and the only statement they made to you was that they felt that they were in a poor state of health, they would regard their health status as poor, could you draw any conclusions about the cause of their condition?

A. Not without more information than that.

Q. If in addition to that information of them giving you their health status, in our example, poor health status, and if they reported themselves to be a cigarette smoker, would you be able to make any conclusions about the cause of their perceived poor state of health?

A. Not -- not totally, no. You would still need more information.

Q. What is the nature of the additional

information that you would need to draw some kind of conclusions?

A. I would like to know what kind of symptoms they're having. Just feeling bad is really nonspecific, which could be anything from nothing wrong to seriously ill. Usually, patients will have more symptoms than that, and when pressed, come up with some. And so once you take the symptoms, then that points you in the direction in which you need to look to try to find the origin of the problem or what's going on.

Q. Once you know about the symptoms and it points you in a direction to look, you still need more information, don't you, before you can make any kind of conclusion?

A. That's -- that's -- the additional thing is knowing where to look, but you still have to look, and looking is whatever physical examination or testing is required to make a diagnosis.

Q. What is entailed within the physical examination that you would conduct on such a patient?

A. Well, you complete a -- what I would term a complete examination. It's not a totally complete one because there are obviously some aspects that are glossed over, but, generally speaking, examine the skin, the head, eyes, ears, nose, throat, check the chest, listen to the lungs, listen to the heart, examine the lymph

nodes, feel the abdomen, spleen enlargement, any masses, genitalia exam and rectal exam, extremities and a brief neurological examination.

Q. Let's assume for the sake of this discussion that in the course of this physical examination, you make a finding that is considered consistent with the possibility that this individual has carcinoma of the lung. What additional measures would you take to determine the exact disease state?

A. What did I find to make that determination?

Q. The chest x-ray revealed a shadow in the lung consistent with the presence of a mass.

A. Okay. If the x-ray showed something suspicious, then probably would do a CAT scan to get a better picture of it, see what it looks like, whether any lymph nodes are involved or what's going on with it.

Following that, would proceed with what we talked about to begin with, make a biopsy in some way, whether it be bronchoscopy or needle through the chest or whatever, and then do the staging studies, as I mentioned initially. Once we have a diagnosis, check the abdomen, and if necessary, the brain, bone, see about any other possibility of a spread, or if it's a metastatic lesion, where a primary -- another primary might be -- or where the primary might be.

Q. Now, after you've had the opportunity to review the x-ray revealing something in the lung, you've had the CAT scan and you've had the procedure necessary to take a tissue specimen, what is the defining point for when you can arrive at a diagnosis?

A. When you have the tissue out that says this is cancer.

Q. In the instance of a patient where you are unsuccessful in actually obtaining tissue reflecting a malignancy, is it possible for you to diagnose that patient nonetheless with lung cancer?

A. I don't think you can ever be certain, 100 percent certain of a cancer in the absence of a tissue diagnosis. Even though you may be 99 percent sure, there's always that 1 percent. And I've seen it, patients who look like they have cancer, and then they don't that come to surgery. There's many a person who's had exploratory surgery and have the nodules taken out and they turn out to be an inflammatory nodule or whatever. So I don't think you can ever be sure without tissue.

Q. Are there any laboratory studies that you might conduct to better define the exact diagnosis?

A. Of a lung cancer?

Q. Yes.

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A. There are not any specific laboratory studies. There's some markers that might be of some value, but they're not specific, and they're not -- they're non-approved by FDA, for instance, for use in a situation like this, nor are there any that are really generally recognized by the medical community as being diagnostic enough that you would not need tissue.

Q. Doctor, do survival rates differ among the various categories of cell type lung cancer in the main category of non-small cell cancer of the lung?

A. There's some differences, but I don't remember exactly which is which.

Q. By comparison to the survival rates for small cell cancer of the lung, do patients with non-small cell cancer of the lung survive longer or shorter periods of time?

A. Well, you've got a differing group. You've got a group of non-small cell who are -- have curable disease, cured by surgery. Patients with minimal stage disease, you know, 40, 50, 60 percent of them possibly can be cured with surgery. So you got that big group.

Now, once they've got metastatic disease, these are -- these are -- patients do not live very long. So they have a shorter survival.

The small cell carcinoma group, you're not going to cure a whole lot. You'll cure some,

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but not a whole lot, but then you can prolong their life with chemotherapy and radiation, get remissions, and go several years sometimes before they eventually die of disease. So you've got to balance those off, and I don't really remember which one actually does better than the other one.

Q. Remembering that you have indicated you're not an expert on the aggregate costs or overall costs that might apply to the state of Mississippi, but just within your personal clinical experience, is it possible for you to compare the relative cost of treating a patient with non-small cell cancer of the lung versus someone with small cell cancer of the lung?

A. I could not give you the figures for that. I think what you would have -- you have to take into consideration on the non-small cell the stage of disease and the type of treatment, because if you're talking about surgery followed by chemotherapy and radiation, for instance, you've got one set of figures. If you're talking about the small cell cancer with limited disease, you're talking about just maybe six months of chemotherapy and a little radiation, and so the treatment for that would be much less because you don't have the surgical expense, basically, maybe, the same chemotherapy and radiation expense, but you got the surgery in addition to the non- -- to the non-small cell. If you're talking about an

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advanced non-small cell, then the chemotherapy expense is going to be similar for the two conditions, and radiation would be the same if they're -- if you're treating comparably. If you're treating a bulky tumor, you're going to get five to six weeks of radiation no matter which one you treat, and so it would be about the same thing. If you're just using radiation for a palliative treatment, for instance, for a bony metastasis, it would be a different figure as far as cost for radiation.

So I think it's very complicated to -- to exact -- for me to tell you exactly now which one is more or whatever. I need to know more than that, and I need to know actually what the radiation costs, which is easy to get, just ask the radiation therapist, how much for treatment, and how many treatments you get, you multiply it out.

And, certainly, surgical costs are known. The hospital could tell you. The hospital knows exactly what Medicaid pays for surgery.

I know what they pay for hospitalized chemotherapy, and I know what they pay in their office. I can give you those figures, but I could not give the others.

Q. There's an item on your expert report, Doctor, that reads: "Patient communications concerning the diagnosis, treatment and

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prevention, and the pain and suffering associated with the disease." What's your understanding of the testimony you expect to provide under that category?

A. I would think the course of the illness. I would dare say I wouldn't -- I would have very little to say about prevention. It would be more on the -- just the course that the patient would follow with the cancer.

Q. Do you advise your patients who are smokers not to smoke?

A. It depends on -- lung cancer patients you're talking about?

Q. Yeah. Let's talk about lung cancer patients.

A. If the patient has lung cancer and it is incurable, with little chance for a good remission, I see no point in putting them through the problems of quitting smoking, unless they're having symptoms referable to smoking. If they've got significant chronic lung disease, then stopping smoking might give them some relief from that, allow them to breathe better and have a little better quality of life. If it's just to stop smoking, to quit smoking to keep from getting cancer, there's no point in it. They're dying of cancer.

And, of course, as most people realize, for someone who has been a long-term smoker, it is

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sometimes quite difficult to quit, and they go through a lot of so-called withdrawal, perhaps, symptoms or whatever, having an uncomfortable time for some period.

So, no, I don't routinely ask these people to quit, but I have seen patients -- I've seen a number of patients who, for instance, had lung cancer removed, continued to smoke and then six, seven years later have a brand new lung cancer, quite possibly they could have prevented, you know, had they quit. That kind of patient, I would urge to quit. Someone dying of lung cancer, not necessarily.

Q. In the instance that you just described, would you regard that as a recurrence of the original cancer?

A. No. I think it would be -- well, it could be a recurrence, if it's a metastatic tumor, and sometimes they're hard to tell, the metastatics -- it's hard to tell a metastatic from a primary, but sometimes you can, and five years later, you can get a metastatic; six, seven years later, you can get a metastatic. I've seen it happen, and I've had a few patients that go as long as seven years and have a recurrence, but that's unusual when it happens. But, generally speaking, a tumor that shows up six or seven years after one's been removed just may well be a brand new one.

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Q. Again, recognizing that you've already taken the position that you are not an expert on Mississippi Medicaid costs generally, in your experience with Medicaid patients who do smoke, would you consider, in general, that all of their medical-related expenses are due to their smoking?

A. Restate the question.

MR. KEMNA: Can you read that back?

(Question read.)

THE WITNESS:

A. There's no way you could say that. They could break a leg or get pneumonia or whatever. It can't be related to smoking, necessarily.

MR. KEMNA:

Q. So that in each case with respect to an individual where a medical expense would be incurred, you would have to know the nature of that medical expense in terms of what condition it was intended to treat as to whether or not you believed that it would be a smoking-related expense; is that correct?

A. That's correct.

Q. Doctor, do you believe that medical science has determined all the potential causes of lung cancer?

A. I don't know. I think, quite possibly, it hasn't. I don't think we know totally. It may be we have found out all the causes. I don't know.

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Q. Do you have any explanation for why some people who smoke get lung cancer and that a substantial number of people who smoke do not get lung cancer?

A. No.

Q. Is it fair to say that lung cancer is really a category of a number of diseases rather than a single disease entity?

A. I don't know that either. There are probably a number of different causes. There's certainly a number of different types, and I guess it would depend on how you define the question as to what you mean by that. The only answer I can give, I think, would be that there are different causes and different types, and in that sense, they may be different, may be a group of cancers. Basically, at the present time, they're treated just as two different groups of cancers, the small and the non-small, all treated alike within those two groups.

Q. Do you know why some individuals develop small cell lung cancer and others develop non-small cell lung cancer?

A. No.

Q. Has there been any explanation provided through any source of information that you have, either medical or scientific, as to why that occurs?

A. I haven't read anything.

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Q. If nobody smoked in the United States, would you still expect some incidence of lung cancer?

A. Yes.

Q. And is the reason why you would expect some incidence of lung cancer that it is a multifactorial disease and that there may be a number of factors responsible for the incidence of lung cancer?

A. There may be a number of agents related to cause, and there may be a number of -- of chromosomal abnormalities or genetic changes within the lung tissue themselves that cause the disease. So, in that sense, yes, it could be.

Q. Doctor, do you believe that cigarette smoking should be banned in this country?

A. I would like to see it banned, but I don't know whether I think it should be.

Q. And what rationale would you have for liking to see it banned, but not being of the belief that it should be banned?

A. Well, several, and several of them are personal. I flew on an airplane to the Dominican Republic, and there were no smoking restrictions, and by the time I got there, I was so choked up I could not enjoy myself for two days until I got a cortisone shot to get relief.

Same thing on a recent trip to Brazil. I was stuck in the smoking section, and I am still

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coughing from that experience.
If I go to a restaurant and people around me are smoking, I'm not necessarily sick, but it's certainly not very appetizing. These are reasons.
Q. And those are reasons for why you would like to see smoking --
A. Why I would like there to be no smoking.
Q. Like there to be no smoking.
A. That's right.
Q. Now, the second part of that was taking the position that you don't know that you believe that it should be banned.
A. Well, I think people have their rights to smoke or do whatever, as long as it doesn't interfere with my rights, and at the current time, it's interfering with my rights, when it gets -- their smoke gets into my lungs and I have problems from it, and I take it personally. Now, if we could take all the smokers and put them in a box somewhere and they could do their own thing, that's all right.
Q. Doctor, are you familiar with data that compares the diagnosis that would be contained within medical records to the diagnosis that results from an autopsy being performed on the individual?
A. You mean -- do you have reference to a clinical diagnosis versus a pathological or anatomical diagnosis, an autopsy?

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Q. Correct.
A. That's right.
Q. Are you familiar with the reported error rates based upon pathological diagnosis compared to clinical diagnosis being as high as 50 percent in making a comparison between autopsy findings and clinical diagnostic findings?
A. I'm not aware of any figure, but I know the error rate would be significant.
Q. What accounts for that error rate, to the best of your estimation?
A. Well, the autopsy gives -- you obtain all of the information, and the clinician may not know some of this. There may be a lung cancer, for instance, there that you don't know about. The available testing is incomplete. A patient -- a good example of that is a patient with lymphoma who I felt was in complete remission by virtue of all the CAT scans being negative, no sign of tumor anywhere, and she died, and her abdomen was filled with lymphoma. The CAT scan just didn't show it. And so, at the time of death, I didn't know what she had died of. At the time of the autopsy, there was lymphoma everywhere.
Q. Doctor, are you familiar with data supportive of an inverse association between cigarette smoking and ulcerative colitis?
A. No.
Q. Are you familiar with data showing an

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inverse relationship between Parkinson's disease and cigarette smoking?
A. No.
Q. Are you familiar with data supporting an inverse association between cigarette smoking and Alzheimer's disease?
A. No.
MR. KEMNA: Doctor, let's break for just a few moments.
(Off the record.)
MR. KEMNA:
Q. Doctor, I want to cover just a couple of other items here. I have in my hands an item I'd like to have marked as Deposition Exhibit No. 3.
(Exhibit 3 was marked.)
MR. KEMNA:
Q. Doctor, Deposition Exhibit No. 3 is a Fed Ex USA Airbill, showing that this was a package sent from Susan Hoffman at the Ness Motley firm in Charleston to you, Dr. David Owen, in Hattiesburg. This is the Fed Ex receipt from the top of the box that you provided to me at the beginning of the deposition containing the materials that were sent to you, and this is dated October 28, 1996: is that correct?
A. I assume so.
Q. Now, that receipt relates to materials you received in the box which included the deposition transcripts that you reviewed in

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advance of this deposition; is that correct?
A. All but Dr. Green's.
Q. And with respect to Dr. Green's deposition, you received that by a separate Fed Ex package consistent with the statement made in this letter from Kathryn Wilkinson, paralegal at the Scruggs, Millette, Lawson firm: is that correct?
A. That's correct.
MR. KEMNA: Let's have this letter marked as Deposition Exhibit No. 4.
(Exhibit 4 was marked.)
MR. KEMNA:
Q. Just for clarification, Deposition Exhibit No. 4 is the letter from Kathryn Wilkinson to Dr. David Owen dated November 5, 1996, and it is a letter, according to the text of the document, sent in advance of Dr. Owen's receipt of the deposition of Dr. Mark Green conducted in this case.
A. It was included in the package.
Q. In the text of this letter, Doctor, the paragraph beginning with the word "Tomorrow," it reads: "Tomorrow, you should expect to receive from Ness Motley, via Federal Express, a copy of the transcript of the deposition of Dr. Mark Green." Do you see that paragraph?
A. Uh-huh. Now, if I remember right, this came in the box with the deposition. It was not a separate letter. See, it's not folded as a

letter.

Q. And as you indicated earlier, even though there is a line at the very top of the page of this letter indicating a fax transmission, the phone number indicated for the fax transmission is not your phone number.

A. It's not. It's not a Hattiesburg exchange.

Q. Oh. Doctor, that's the fax number from the sender.

A. I didn't know whether it was or not, but it --

Q. Yeah, because it's the same number that's listed on their letterhead.

A. It wasn't faxed here, though.

Q. Doctor, what are your fees for participation in litigation matters?

A. My fees are set by the Hattiesburg Clinic. They're $500 an hour.

Q. Is $500 an hour the hourly fee that you expect to charge for this deposition?

A. That's right.

MR. KEMNA: At this point, I'm just going to make a statement for the record. According to the case management order in this case, defense counsel were entitled to an expert statement regarding the experts being listed by plaintiff in this matter pursuant to Rule 26(b)(4), subparagraph A(i). That

requirement of Rule 26 of the Mississippi Rules of Civil Procedure reads: A party may through interrogatories require any other party to identify each person whom the other party expects to call as an expert witness at trial, to state the subject matter on which the expert is expected to testify and to state the substance of the facts and opinions to which the expert is expected to testify and summary of the grounds for each opinion.

The Rule 26 Expert Statement, as this document is entitled, Deposition Exhibit No. 2 for Dr. David Owen, is not in compliance with the Rule 26 requirements for disclosure of information on experts. Of the information presented in this expert report, there is little more information included here than what we would otherwise be aware of, knowing that Dr. David Owen is a practicing oncologist. Having not had any reasonable opportunity to anticipate the scope or the nature of testimony of Dr. David Owen, I would reserve the right at this point for additional discovery necessary to explore the actual opinions Dr. Owen is expected to present in testimony at the trial of this matter. That concludes the deposition.

(Deposition concluded at 3:00 p.m.)

CERTIFICATE OF COURT REPORTER

I, KAREE H. MULHOLLAND, Certified Shorthand Reporter and Notary Public in and for the County of Madison, State of Mississippi, hereby certify that the foregoing pages, and including this page, contain a true and correct transcript of the testimony of the witness, as taken by me at the time and place heretofore stated, and later reduced to typewritten form by computer-aided transcription under my supervision to the best of my skill and ability.

I further certify that I placed the witness under oath to truthfully answer all questions in this matter under the authority vested in me by the State of Mississippi.

I further certify that I am not in the employ of, or related to, any counsel or party in this matter, and have no interest, monetary or otherwise, in the final outcome of the proceedings.

Witness my signature and seal this the _____ day of _____, 1996.

KAREE H. MULHOLLAND, CSR #1255
My Commission expires March 15, 1997

WITNESS SIGNATURE SHEET

I, _____, do solemnly swear that I have read the foregoing _____ pages and that the same is a true and correct transcript of the testimony given by me at the time and place hereinbefore set forth, with the following corrections:

PAGE:	LINE:	SHOULD READ:	REASON FOR CHANGE:
____	____	_____	_____
____	____	_____	_____
____	____	_____	_____
____	____	_____	_____

_____

(WITNESS SIGNATURE)

NOTARIZATION

I, _____, notary public for the State of _____, _____ County, do hereby certify that _____ personally appeared before me this ____ day of _____, 1996, at _____, _____.

My Commission Expires:

_____ _____

(NOTARY PUBLIC)